

WHAT IS CLAIMED IS:

1. A locking device for two displaceable relative to each other, components having arranged opposite each other, toothed racks having each tooth located alongside each other, the locking device comprising:

a clamping device which provides for movement of the two components toward each other whereby teeth of the opposite toothed racks are brought into engagement with each other, and in an open position of which, the opposite toothed racks are spaced from each other and the two components can be displaced relative to each other; and

at least one displaceable against a spring biasing force, operating element provided on at least one of the opposite toothed racks for preventing tips of the teeth of the opposite toothed racks being located opposite each other during closing of the clamping device, the operating element having at least one tooth a tip of which projects beyond a plane of tips of the teeth of the at least one of the opposite racks in an outwardly preloaded position of the operating element, and is located opposite a side flank of a tooth of another of the opposite toothed racks when the tips of the teeth of the opposite racks are located directly opposite each other.

2. A locking device according to Claim 1, wherein the two components form parts of a height-adjustable or inclination and/or length-adjustable steering column.

3. A locking device according to Claim 1, wherein the at least one operating element is formed as a stem extending in a recess in the at least one of the opposite toothed racks, and wherein the at least one tooth is provided at a free end of the stem.

4. A locking device according to Claim 3, comprising a compression spring for biasing the stem, in the open position of the clamping device, to the outwardly preloaded position thereof limited by a stop.

5. A locking device according to Claim 1, wherein in a position of the opposite toothed racks in which the tips of the teeth thereof are located directly opposite each other, the tip of the at least one tooth of the operating element is offset, in a direction parallel to a plane of tips of the teeth of the another of the opposite toothed racks, from a tip of the tooth of the another of the opposite toothed racks opposite the side flank of which it is located, by less than a half of a distance between a tip of a tooth of the another of the opposite toothed racks and a valley between two teeth of the another of the opposite toothed racks measured in the direction parallel to the plane of the tips of the teeth of the another of the opposite toothed racks.

6. A locking device according to Claim 5, wherein the offset between the tip of the at least one tip of the tooth of the another of the opposite toothed racks amounts to one fourth of the distance between the tip of a tooth of the another of the opposite toothed racks and the valley between the two teeth.

7. A locking device according to Claim 4, wherein the compression spring has a biasing force strong enough that, upon the tip of the at least one tooth of the operating element engaging the side flank of the tooth of the another of the opposite toothed racks during closing of the clamping device, with the tips of the teeth of the opposite toothed racks lying directly opposite each other, the two components are displaced relative to each other in a direction parallel to the plane of the tips of the teeth of the at least one of the opposite toothed racks, without the at least one tooth of the operating element being displaced inwardly until the tip of the at least one tooth reaches a bottom of a valley between respective teeth of the another of the opposite toothed racks.

8. A locking device according to Claim 1, wherein two side flanks of the at least one tooth of the operating element have at least in one section of their respective flank extensions, different inclinations and wherein a side flank the one section of which is steeper, is located opposite a tip of a tooth of the another of the opposite toothed racks when the tips of the teeth of the opposite toothed racks are located directly opposite each other.

9. A locking device according to Claim 8, wherein both side flanks of the teeth of the another of the toothed racks have, at least in one section of their respective flank extensions, different inclination, and wherein a side flank the one section of which is steeper, is located opposite a tip of the at least one tooth of the operating element when the tips of the teeth of the opposite toothed racks are located directly opposite each other.

10. A locking device according to Claim 9, wherein in side flank the one section of which is less steep, the less steep section adjoins a tip of a respective tooth and a steeper section adjoins a valley of the respective tooth.

11. A locking device according to Claim 10, wherein the less steep section of a respective tooth of the another of the opposite toothed racks extends parallel to a flank with a less steep section of the at least one tooth of the operating element.

12. A locking device according to Claim 10, wherein the steeper section extends parallel to a respective side flank of a respective tooth of the one of the opposite toothed racks.

13. A locking device according to Claim 8, wherein the side flank with the steeper section of the at least one tooth of the operating element extends

parallel to a side flank of a tooth of the another of the opposite toothed racks and abuts same upon displacement of the two components toward each other.

14. A locking device according to Claim 13, wherein the side flank with the steeper section of the at least one tooth of the operating element in a side view, in a spaced apart position of the opposite racks, substantially coincides with a respective side flank of a respective tooth of the one of the opposite toothed racks and projects beyond the respective side flank.

15. A locking device according to Claim 1, wherein the clamping device comprises a bolt an axis of which extends parallel to a direction of displacement of the two components toward and away from each other.

16. A locking device according to Claim 15, wherein planes of the tips of the teeth of the opposite tooth racks form with the bolt axis an angle that deviates from a right angle.

17. A locking device according to Claim 16, wherein the two components have toothed racks arranged on opposite sides of the bolt, wherein the at least one operating element is provided only in one of the opposite toothed racks of the two components and located on one side of the bolt, and wherein the planes of the tips of two toothed racks of a respective component form together a V-shaped profile in

a longitudinal direction extending parallel to a longitudinal extension of the teeth and parallel to the bolt axis.

18. A locking device according to Claim 17, wherein on a side of the two components opposite, with respect to the bolt axis, the at least one operating member, cooperating guide surfaces are provided.

19. A locking device according to Claim 1, wherein the at least one operating element is supported in a component, which is associated with the one of the opposite toothed racks, for displacement in a direction parallel to a direction of displacement of the two components toward and away from each other.

20. A locking device according to Claim 1, wherein the at least one operating element has several teeth side flanks of which extend parallel to each other and tips of which are spaced from each other by a distance corresponding to one of a distance between the tips of the teeth of the one of the opposite toothed racks and a multiple of the distance between the tips of the teeth of the one of the opposite toothed racks.